

What is claimed is:

1. An isolated and purified recombinant nucleic acid encoding a hemoglobin receptor protein having an amino acid sequence that is the amino acid sequence depicted as Seq. I.D. No. 6.

2. A recombinant expression construct comprising a nucleic acid that encodes a hemoglobin receptor protein from a *Neisseria* species having an amino acid sequence that is the amino acid sequence depicted as Seq. I.D. No. 6.

3. A transformed cell culture comprising the recombinant expression construct of Claim 2.

4. An isolated and purified recombinant nucleic acid encoding a hemoglobin receptor protein having an amino acid sequence that is the amino acid sequence depicted as Seq. I.D. No. 8.

5. A recombinant expression construct comprising a nucleic acid that encodes a hemoglobin receptor protein from a *Neisseria* species having an amino acid sequence that is the amino acid sequence depicted as Seq. I.D. No. 8.

6. A transformed cell culture comprising the recombinant expression construct of Claim 5.

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